

IN THE CLAIMS

1. (Currently Amended) A method comprising:
detecting a wireless device within communication range of a host device;
authenticating, by a host device, ~~a the~~ detected wireless device according to ~~a challenge and response scheme regarding an authentication key requested device identification information~~ of the detected wireless device;
if the detected wireless device fails authentication, requesting audio authentication initialization information from the detected device;
authenticating the detected wireless device based on the requested audio authentication initialization information; and
storing, by the host device, ~~the authentication key~~ one or more of a device identification code and a device personal identification number of the detected wireless device as device identification information to enable ~~a challenge and response scheme~~ for subsequent authentication of the detected wireless device.

2. (Currently Amended) The method of claim 1, wherein prior to ~~authenticating~~ detecting the ~~detected~~ wireless device ~~according to the challenge and response scheme~~, the method further comprises:
receiving an audio device authentication set-up request from a user of a wireless device;
requesting audio ~~authentication initialization~~ device identification information for the detected wireless device;
receiving the audio device identification information from the detected device; and
storing the received audio ~~authentication initialization~~ device identification information as an authentication initialization token for the detected wireless device.

3. (Original) The method of claim 2, further comprising:
storing the authentication initialization token within the detected wireless device.

4. (Currently Amended) The method of claim 2, wherein storing further comprises:
compressing the received audio device identification information; and
generating a hash value of the compressed audio device identification information to form the authentication initialization token of the detected wireless device.

5. (Currently Amended) The method of claim 1, wherein, ~~prior to authenticating the detected wireless device according to the challenge and response scheme, the method detecting the wireless device~~ further comprises:

polling a surrounding area of the host device for audio sources within a pre-determined distance of the host device; and

when an audio source is detected, initiating an authentication handshake with an audio source device of the detected audio source.

6. (Currently Amended) The method of claim 1, wherein authenticating the detected device according to ~~the challenge and response scheme~~ requested device identification information, further comprises:

requesting the device identification information from the detected wireless device;

comparing the requested device identification information with stored device authentication information within the host device;

when matching device authentication information is found, establishing an audio link with the detected wireless device; and

otherwise, initiating a request for audio authentication initialization information of the detected wireless device.

7. (Currently Amended) The method of claim 1, wherein authenticating the detected wireless device based on the requested audio authentication information further comprises:

receiving audio device identification information as the requested audio authentication initialization information;

compressing the received audio device identification information;

generating a hash value of the compressed audio device identification information to form a requested device authentication initialization token;

comparing the requested device authentication initialization token to one or more stored device authentication initialization tokens; and

when a matching stored authentication initialization token is detected, storing the ~~authentication key~~ requested device identification information of the detected wireless device as a device authentication token.

8. (Currently Amended) The method of claim 1, wherein authenticating the detected device based on the requested audio authentication information further comprises:

receiving an audio authentication token as the requested audio authentication information of the detected wireless device;

comparing the received audio authentication token to one or more stored audio authentication tokens;

when a matching stored audio authentication token is detected, establishing an audio link with the detected wireless device; and

storing the requested device identification information authentication key as a device authentication token of the detected wireless device.

9. (Currently Amended) The method of claim 8, further comprising:

otherwise, requesting manual authorization from a user of the host device to authenticate the detected wireless device;

when the user provides manual authentication authorization, storing the requested device identification information authentication key as a device authentication token of the detected wireless device; and

establishing an audio link between the detected wireless device and the host device.

10. (Currently Amended) The method of claim 1, wherein authenticating the detected wireless device according to the challenge and response scheme, further comprises:

requesting an authentication token from the detected wireless device; and

receiving ~~one of an authentication key and a device identification code and a device personal identification number from the detected wireless device as the requested device identification information~~ authentication token.

11. (Currently Amended) A computer readable storage medium including program instructions that direct a computer to function in a specified manner when executed by a processor, the program instructions comprising:

detecting a wireless device within communication range of a host device;

authenticating, by a host device, ~~a the detected wireless device according to a challenge and response scheme regarding authentication~~ requested device identification information of the detected wireless device;

~~when-if~~ the detected wireless device fails authentication, requesting audio authentication initialization information from the wireless detected device;

authenticating the detected device based on the requested audio authentication initialization information; and

storing, by the host device, ~~the authentication information one or more of a device~~ identification code and a device personal identification number of the detected wireless device ~~as device identification information~~ to enable a challenge and response scheme for subsequent authentication of the detected wireless device.

12. (Currently Amended) The computer readable storage medium of claim 11, wherein prior to ~~authenticating-detecting~~ the wireless device ~~according to the challenge and response scheme~~, the method further comprises:

receiving an audio device authentication set-up request from a user of the detected wireless device;

requesting audio device identification information for the detected wireless device;

receiving the audio device identification information from the detected device; and

storing the received audio device identification information as an authentication initialization token for the detected wireless device.

13. (Original) The computer readable storage medium of claim 12, further comprising:

storing the authentication initialization token within the detected wireless device.

14. (Original) The computer readable storage medium of claim 12, wherein storing further comprises:

compressing the received audio device identification information; and

generating a hash value of the compressed audio device identification information to form the authentication initialization token of the wireless device.

15. (Currently Amended) The computer readable storage medium of claim 11, wherein ~~prior to authenticating-detecting~~ the wireless device ~~according to the challenge and response scheme~~, further comprises:

polling a surrounding area of the host device for audio sources within a pre-determined distance of the host device; and

when an audio source is detected, initiating an authentication handshake with an audio source device of the detected audio source.

16. (Currently Amended) The computer readable storage medium of claim 11, wherein authenticating the detected wireless device according to the ~~challenge-and-response scheme~~requested device identification information, further comprises:

- requesting the ~~authentication device identification~~requested device identification information from the detected wireless device;

- comparing the requested ~~authentication device identification~~requested device identification information with stored device authentication information within the host device;

- when matching ~~authentication device identification~~requested device identification information is found, establishing an audio link with the detected wireless device; and

- otherwise, initiating a request for audio authentication initialization information of the detected wireless device.

17. (Currently Amended) The computer readable storage medium of claim 11, wherein authenticating the detected device based on the requested audio authentication information further comprises:

- receiving an audio device identification information as the requested audio identification information;

- compressing the received audio identification information;

- generating a hash value of the compressed audio device identification information to form a requested device authentication initialization token;

- comparing the requested device authentication initialization token to one or more stored device authentication initialization tokens; and

- when a matching device authentication initialization token is detected, storing the ~~authentication-requested device identification~~requested device identification information as a device authentication token of the detected wireless device.

18. (Currently Amended) The computer readable storage medium of claim 11, wherein authenticating the detected device based on the requested audio authentication information further comprises:

- receiving an audio authentication token as the requested audio identification information of the detected wireless device;

comparing the received audio authentication token to one or more stored audio authentication tokens;

when a matching stored audio authentication token is detected, establishing an audio link with the detected wireless device; and

storing the ~~authentication~~requested device identification information as a device authentication token of the detected wireless devices.

19. (Currently Amended) The computer readable storage medium of claim 18, further comprising:

otherwise, requesting manual authorization from a user of the host device to authenticate the detected wireless device;

when the user provides manual authentication authorization, storing the ~~authentication~~requested device identification information of the detected wireless device; and

establishing an audio link between the detected wireless device and the host device.

20. (Currently Amended) The computer readable storage medium of claim 11, wherein authenticating the device according to the requested device identification information~~challenge and response scheme~~, further comprises:

requesting authentication information from the detected wireless device; and

receiving ~~one of an authentication key and a device identification code and a device personal identification number~~ from the detected wireless device as the requested authentication information.

21. (Currently Amended) A method comprising:

receiving, by a wireless device, a communications connection request from a host device; engaging in a challenge and response scheme with the host device according to authentication information held by the wireless device to enable the host device to authenticate the wireless device;

if a request for audio authentication initialization information is received from the host device, providing audio authentication initialization information to the host device; and

once the audio authentication initialization information is authenticated by the host device, ~~establishing an audio link between the wireless device and providing~~ the host device with one or more of a device identification code and a device personal identification number of the

wireless device as device identification information to enable subsequent authentication of the wireless device.

22. (Previously Presented) The method of claim 21, wherein engaging in the challenge and response scheme authentication further comprises:

- receiving a request for authentication information of the wireless device;
- providing the requested authentication information to the host device; and
- when the requested authentication information of the wireless device is not authenticated by the host device, receiving a request for audio authentication initialization information of the wireless device.

23. (Original) The method of claim 22 wherein providing audio authentication initialization information to the host device further comprises:

- requesting audio authentication initialization information from a user of the wireless device;
- receiving audio device identification information from the user as the authentication initialization information; and
- providing the audio device identification information to the host device as the requested audio authentication initialization information.

24. (Original) The method of claim 22, further comprising:

- selecting a stored audio authentication initialization token; and
- transmitting the audio authentication initialization token to the host device.

25. (Original) The method of claim 21, wherein prior to receiving the connection request, the method further comprises:

- receiving a device authentication set-up request from a user of the wireless device;
- requesting, from the user, audio device identification information as audio authentication initialization information of the wireless device; and
- once the audio device identification information is received from the user, storing the voice audio device identification information as an audio authentication initialization token of the wireless device.

26. (Currently Amended) A computer readable storage medium including program instructions that direct a computer to function in a specified manner when executed by a processor, the program instructions comprising:

- receiving, by a wireless device, a connection request from a host device;
- engaging in a challenge and response scheme with the host device according to authentication information held by the wireless device to enable the host device to authenticate the wireless device;

- if a request for audio authentication initialization information is received from the host device, providing audio authentication initialization information to the host device; and

- once the audio authentication initialization information is authenticated by the host device, establishing an audio link between the wireless device and providing the host device with one or more of a device identification code and a device personal identification number of the wireless device as device identification information to enable subsequent authentication of the wireless device.

27. (Previously Presented) The computer readable storage medium of claim 26, wherein engaging in the challenge and response scheme authentication further comprises:

- receiving a request for device identification information of the wireless device;
- providing the requested device identification to the host device; and
- when the requested authentication information of the wireless device; is not authenticated by the host device, receiving a request for audio authentication initialization information of the wireless device.

28. (Original) The computer readable storage medium of claim 26, wherein providing audio authentication initialization information to the host device further comprises:

- requesting audio authentication initialization information from a user of the wireless device;

- receiving audio device identification information from the user as the authentication initialization information of the detected wireless device; and

- providing the audio device identification information to the host device as the requested audio authentication initialization information.

29. (Original) The computer readable storage medium of claim 27, further comprising:

selecting a stored audio authentication initialization token; and
transmitting the audio authentication initialization token to the host device.

30. (Original) The computer readable storage medium of claim 26, wherein prior to receiving the connection request, the method further comprises:
receiving a device initialization request from a user of the wireless device;
requesting, from the user, audio device identification information as audio authentication initialization identification information of the wireless device; and
once the audio device identification information of the wireless device is received,
storing the audio device identification information as an authentication initialization token of the wireless device.

31. (Currently Amended) An apparatus, comprising:
an authentication unit to authenticate at least one wireless device detected within communications range of the apparatus using audio authentication initialization information of the detected wireless device if a challenge and response scheme for authentication according to ~~an authentication key~~device identification information of the detected wireless device fails to authenticate the detected wireless device;

a communications interface coupled to the authentication unit, the communications interface to establish ~~an~~ audio links with ~~the~~ authenticated wireless devices, request device ~~authentication-identification~~ information as well as audio device authentication initialization information from ~~the~~ detected wireless ~~devices~~device; and

a storage device coupled to the authentication unit, containing an audio authentication initialization token as well as ~~an authentication key~~one or more of a device identification code and a device personal identification number as device identification information for each ~~at least one~~ wireless device initialized by the apparatus to enable subsequent authentication of the initialized wireless device.

32. (Original) The apparatus of claim 31, further comprising:
a device initialization unit to request audio device identification information in response to a device authentication set-up request from a user of a wireless device and store the received audio device identification information as an authentication initialization token of the wireless device.

33. (Original) The apparatus of claim 31, wherein the authentication unit compares a received audio authentication initialization token to one or more stored audio authentication initialization tokens, establishes an audio link with a detected wireless device when a matching stored audio authentication initialization token is detected, and stores requested device identification information of the detected wireless device as an authentication key.

34. (Currently Amended) A system comprising:
a host device; and
~~one or more~~ at least one wireless devices, ~~each device, the~~ wireless device including:
a processor having circuitry to execute instruction; and
a storage device having a sequence of instructions stored therein, which when executed by the processor causes the processor to:
engage in a challenge and response scheme with the host device according to ~~authentication~~ device identification information held by the wireless device to enable the host device to authenticate the wireless device;
request an audio authentication initialization information from a user of the wireless device if an audio authentication initialization request is received from the host device;
receive ~~an~~ audio device identification information from the user; ~~and~~
provide the audio device identification information to the host device as the requested audio authentication initialization information; and
once the audio authentication initialization information is authenticated by the host device, providing the host device with one or more of a device identification code and a device personal identification number of the wireless device as device identification information to enable subsequent authentication of the wireless device.

35. (Original) The system of claim 34, wherein the host device further comprises:
an authentication unit to authenticate wireless devices detected within communications range of the host device using audio authentication information of the detected wireless devices;
a communications interface coupled to the authentication unit, the communications interface to establish audio links with authenticated wireless devices, request device identification information as well as audio authentication initialization information from detected wireless devices; and

a storage device coupled to the authenticating unit, containing an audio authentication initialization tokens as well as device identification information for each wireless device initialized by the host device.

36. (Original) The system of claim 34, wherein the host device further comprises:
a device initialization unit to request an audio device identification in response to a device authentication set-up request from a user of a wireless device and store received audio device identification information as an authentication initialization token for the wireless device.